



Product Assurance

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Product Assurance



- **Product Assurance Plan NCST-D-FM005**
- **Safety, Reliability and Quality Assurance Plan NCST-D-FM006**
- **NCST is ISO9001 Complaint**
 - **NCST-MCP-001, Manual for Control Procedures**
 - **NCST-MMP-001, Manual for Manufacturing Procedures**
 - **NCST-MQA-001, Manual for Quality Assurance Procedures**
- **Lockheed-Martin is ISO9001 Registered**
- **All Subcontractors Are Surveyed to Assure Compliance With the US Commercial Equipment ANSI 9001**

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MP = Manufacturing Procedures
PO = Purchase Order
QA = Quality Assurance Procedures
QC = Quality Control

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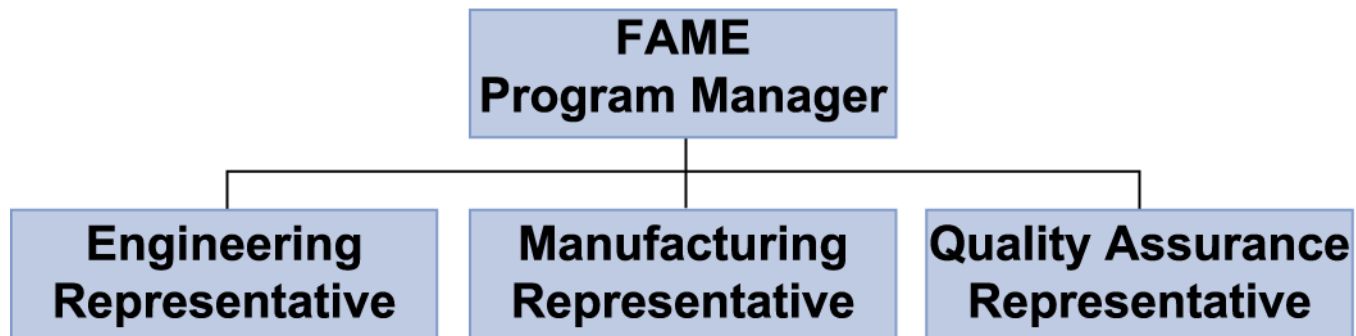
Manufacturing Flow at NCST



- **Typical of Industry Standard With One Major Exception**
- **Industry Standard Is for Operations (Manufacturing and Quality Departments) to Maintain Control of Hardware At All Times**
- **At NCST, Engineering Takes Control of Hardware for Testing and Verification**



Control of Anomalies, Non-Conformances and Failures



comb_material.ai

FAME Combined Material Review Board and Parts Control Board



Product Assurance Records and Reporting



- **Inspection Report**
 - Inprocess Inspections During Manufacturing
 - Non-Standard Workmanship Is Corrected or an NMR Is Generated
- **Non-Conforming Material Report (NMR)**
 - Opened if Unable to “Return-to-Print”
- **Test Anomaly Report (TAR)**
 - After Verification of Assembly, Engineering Conducts All Test and Verification
 - Engineering Opens a TAR for Every Anomaly
- **Discrepancy Report (DR)**
 - If the Investigation of an Anomaly Indicates Flight Hardware Related
- **Failure Analysis Report (FAR)**
 - Generated to Support DR As Required



Disposition of Anomalies



- **If Test Anomaly Report, Discrepancy Report and Supporting Failure Analysis Report Implicate Flight Hardware, an NMR Is Opened and Used for Disposition of Hardware**
- **Problems at Contractors Are Handled With Wavers to Contract and All Wavers Are Attached to NMRs**
- **At Hardware Reviews and By-Offs, All NMRs Except “Scrap” and “Return-to-Print” NMRs Are Presented and Reviewed**